
Factors that Differentiate Smokers from Exsmokers in a Florida Metropolitan Area

SYLVI A. DZEGEDE, MA
JOHN R. HACKWORTH, PhD
STEVEN W. PIKE, MA

MANY COMMUNITIES have limited resources to devote to public health problems; therefore, it is important that at-risk groups be identified. Educational and service programs can then be directed toward these target groups. Since smoking cigarettes is a proved health hazard (1), it is useful to know which factors characterize the people who quit smoking successfully, as well as to identify a community's subpopulations that are at greatest risk of continuing to smoke.

We report the results of a study of smoking behavior in a representative cross-section of a major metropolitan community. The study was conducted in 1978 in Broward County, located in southeast Florida. The county, which forms the Fort Lauderdale-Hollywood Standard Metropolitan Statistical Area (SMSA), had an estimated population of 929,584 in 1978. An important feature of Broward County is its large number of elderly people; an estimated 21.1 percent of the population was aged 65 and over in 1978. The population included a relatively low proportion of nonwhites, 10.7 percent. An estimated 52.7 percent of the inhabitants were females (2).

The authors are with the Research Division, Health Planning and Development Council for Broward County, Inc., 1164 East Oakland Park Boulevard, Fort Lauderdale, Fla. 33334. Tearsheets requests to Sylvi A. Dzegede, P. O. Box 246, Deerfield Beach, Fla. 33441.

Methods

The Health Interview Survey. The Health Interview Survey of Broward County was conducted in 1978 by the Health Planning and Development Council for Broward County, Inc., and the Broward County Health and Medical Department, with assistance from the National Center for Health Statistics. The study included sociodemographic and health status variables, among which were questions about past and present smoking behavior.

The universe from which the sample was drawn consisted of all households in the county. A systematic, non-dense cluster sample was selected from this universe by means of postal listings obtained from a private mailing firm. The total sample was 7,745 persons, representing 0.8 percent of the county population in 1978.

The interviewers were trained by representatives from the Bureau of the Census and the National Center for Health Statistics. Quality assurance was implemented at all levels of the research process. The sample distribution by age, race, and sex differed little from population figures reported by the Bureau of Economic and Business Research of the University of Florida, which produces annual population estimates (2). The sample varied from population estimates ± 2 percent by age group; it contained 0.2 percent more males and 3.6 percent more nonwhites.

Categories of smoking behavior. Two detailed questions about smoking behavior were asked in the survey. Do you presently smoke cigarettes? (yes or no): (a) if yes, how many years have you been smoking? (number of years) (b) if yes, how many cigarettes do you smoke in an average day? (5 categories). If you are not currently smoking, have you ever smoked cigarettes in the past? (yes or no): (a) if yes, how many cigarettes did you smoke in an average day? (5 categories) (b) if yes, how many years has it been since you last quit smoking? (5 categories, starting with "less than 1 year").

Only adults aged 20 and over were considered in the analysis of smoking behavior, since teenagers had fewer years in which to have become established as successful smokers. Of the total sample of 7,745 persons, 5,497 were aged 20 and over. Of those aged 20 and over, 90 did not respond to questions on smoking. Of the remaining 5,407 respondents, 2,707 (50.1 percent) had never smoked.

Two categories of current smokers were differentiated: those who smoked at least $\frac{1}{2}$ pack of cigarettes daily (regular smokers) and those who smoked fewer cigarettes daily (light smokers). Regular smokers accounted for 1,535 of the 1,649 current smokers. Research on smoking cessation programs has shown that the greatest recidivism occurs in the first 5 weeks of

followup (3). Therefore, "regular exsmokers," besides including those who had smoked $\frac{1}{2}$ pack or more daily, included only persons who had also been abstinent from smoking for at least 1 year. Regular exsmokers accounted for 819 of the 1,051 exsmokers. Several variables considered to affect smoking behavior were available in the survey: age, race, sex, marital status, education, occupation, income, and cigarette consumption levels.

Statistical methods. The cross-tabulations of data for the study were compiled by use of the Statistical Package for the Social Sciences (SPSS) computer program. Because age is a crucial variable in analyzing smoking behavior (4-8), all cross-tabulations were performed by age groups: 20-34, 35-49, 50-64, and 65 years and over.

Before we focused on comparisons between regular smokers and exsmokers, we compared all smokers and exsmokers (both regular and other) to compute cessation rates. A cessation rate, such as the one used here, effectively adjusted for differential levels of nonsmoking among the various age-race-sex groups. The cessation rate per 100 persons who ever smoked was calculated as the sum of all exsmokers divided by the sum of all smokers plus all exsmokers, times 100.

The cessation rate was computed for each age-race-sex category in the sample. Comparisons for each mar-

ital status, socioeconomic status, and cigarette consumption level by age group were then made between regular smokers and exsmokers. The chi-square test was used to determine significant differences, with the Yates correction applied in the cases of marital status and education level, which were 2×2 tables.

Results

Age, race, and sex differences in smoking behavior. Approximately half of the sample had never smoked cigarettes. Only 2.1 percent of the entire sample had been smoking less than $\frac{1}{2}$ pack of cigarettes daily (table 1). Another 4.3 percent had either quit smoking for less than 1 year or before quitting, had smoked less than $\frac{1}{2}$ pack daily. The two groups of interest to this study made up the rest of the sample: 28.4 percent were regular smokers, and 15.1 percent were regular exsmokers. Proportionately fewer women than men were regular smokers. Nonwhite men averaged the highest smoking rate at 32.0 percent (table 2). Smoking peaked during ages 35–49 among men and white women. Smoking among nonwhite women aged 20–64 averaged around 20 percent.

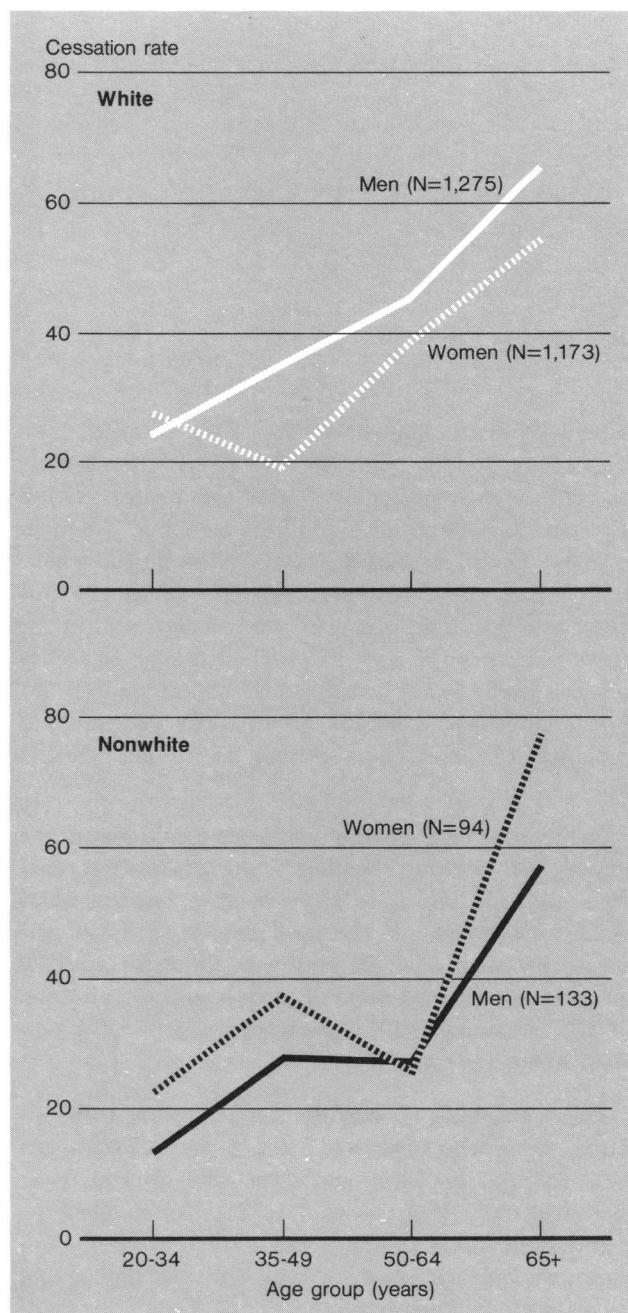
Although teenagers were not included in the analysis, data available in the survey revealed that the smoking rate for white females aged 14–19 was 19.3 percent, compared with 15.9 percent for white males. On the other hand, 6.7 percent of nonwhite females and 8.9 percent of nonwhite males aged 14–19 were smoking. Although the prevalence of smoking among men aged 20 and over exceeded that of women, the information on teenage smoking behavior suggests that, in the future, women's smoking rates may exceed those of men, at least among the white population.

Generally, smoking cessation rates increased with age (table 1). The convergence between white men and women aged 20–34 (see chart) parallels findings of an earlier study (8). On the average, 43.8 percent of the white men who had ever smoked had quit. Only 27.8 percent of the nonwhite men, however, had stopped smoking. Women, regardless of race, had about the same cessation rates. On the average, more than one-third of all women who ever smoked had quit.

The effect of being married. Being married was significantly associated with smoking cessation for all age groups, except the elderly (table 3). Additionally, the effect of marital status generally declined with age. Although originally we had four marital status categories—married, divorced or separated, widowed, and never married—a preliminary examination disclosed insufficient numbers in each nonmarried category by age group to justify separating them in the analysis.

More than half of the nonmarried persons aged 20–34 were never married. However, most of the nonmarried persons aged 35–49 were divorced or separated. The age category 50–64 contained about as many divorced or separated as widowed persons; it included few never-married persons. The majority of nonmarried elderly were widows or widowers. Proportionately twice as many exsmokers aged 20–24 were married (22.5 percent) than not married (9.4 percent). By ages

Smoking cessation rates for white and nonwhite men and women, by age group, Broward County, Fla., 1978



50-64, this difference diminished to 40.3 percent ex-smokers among married compared with 28.0 percent among nonmarried persons.

Socioeconomic status differences. Socioeconomic status had certain relationships to smoking cessation (table

4). In the under-50 age groups, the proportions of ex-smokers among post-high school graduates were higher than among those with less education (for example, 30.5 percent compared with 21.1 percent in the 35-49 age group). The category of education termed "high school or less" was not subdivided because most of

Table 1. Distribution of all smokers and exsmokers in sample, by sex and age group, Broward County, Fla., 1978

Sex and age group (years)	Number ¹	Smokers				Exsmokers				Cessation rate per 100 ever smoked
		Regular		Light		Regular		Other		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Total sample	5,358	1,523	28.4	114	2.1	808	15.1	230	4.3	38.8
20-34	1,490	472	31.7	34	2.3	104	7.0	66	4.4	25.1
35-49	1,153	440	38.2	23	2.0	139	12.1	44	3.8	28.3
50-64	1,234	381	30.9	30	2.4	234	19.0	49	4.0	40.8
65 and over	1,481	230	15.5	27	1.8	331	22.3	71	4.8	61.0
Men	2,479	765	30.9	47	1.9	497	20.0	99	4.0	43.8
20-34	697	242	34.7	11	1.6	49	7.0	27	3.9	24.4
35-49	557	226	40.6	10	1.8	98	17.6	22	3.9	34.5
50-64	554	180	32.5	10	1.8	132	23.8	16	2.9	45.2
65 and over	671	117	20.0	16	2.4	218	32.5	34	5.1	65.8
Women	2,879	758	26.3	67	2.3	311	10.8	131	4.6	34.9
20-34	793	230	29.0	23	2.9	55	6.9	39	4.9	27.1
35-49	596	214	35.9	13	2.2	41	6.9	22	3.7	21.7
50-64	680	201	29.6	20	2.9	102	15.0	33	4.9	37.9
65 and over	810	113	14.0	11	1.4	113	14.0	37	4.6	54.7

¹ Includes nonsmokers. NOTE: 49 missing.

Table 2. Distribution of all smokers and exsmokers in sample, by race, sex, and age group, Broward County, Fla., 1978

Race, sex, and age group (years)	Number ¹	Smokers				Exsmokers				Cessation rate per 100 ever smoked
		Regular		Light		Regular		Other		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	
White men	2,220	682	30.7	34	1.5	471	21.2	88	4.0	43.8
20-34	602	211	35.0	6	1.0	47	7.8	23	3.8	24.4
35-49	485	194	40.0	9	1.9	89	18.4	18	3.7	34.5
50-64	497	166	33.4	5	1.0	126	25.4	15	3.0	45.2
65 and over	636	111	17.5	14	2.2	209	32.9	32	5.0	65.8
White women	2,558	702	27.4	61	2.4	300	11.7	110	4.3	35.0
20-34	669	205	30.6	22	3.3	52	7.8	34	5.1	27.5
35-49	502	197	39.2	10	2.0	38	7.6	13	2.6	19.8
50-64	614	188	30.6	19	3.1	100	16.3	30	4.9	38.6
65 and over	773	112	14.5	10	1.3	110	14.2	33	4.3	54.0
Nonwhite men	259	83	32.0	13	5.0	26	10.0	11	4.2	27.8
20-34	95	31	32.6	5	5.3	2	2.1	4	4.2	14.3
35-49	72	32	44.4	1	1.4	9	12.5	4	5.6	28.3
50-64	57	14	24.6	5	8.8	6	10.5	1	1.8	26.9
65 and over	35	6	17.1	2	5.7	9	25.7	2	5.7	57.9
Nonwhite women	321	56	17.4	6	1.9	11	3.4	21	6.5	34.0
20-34	124	25	20.2	1	0.8	3	2.4	5	4.0	23.5
35-49	94	17	18.1	3	3.2	3	3.2	9	9.6	37.5
50-64	66	13	19.7	1	1.5	2	3.0	3	4.5	26.3
65 and over	37	1	2.7	1	2.7	3	8.1	4	10.8	77.8

¹ Includes nonsmokers. NOTE: 49 missing.

the sample had completed high school, 74 percent of both smokers and exsmokers.

Occupational categories were aggregated into four groups: white-collar workers, blue-collar workers, housewives, and retirees. In general, blue-collar workers had low proportions of exsmokers (table 5). The effect of occupational category was significant among persons aged 35–49 and 50–64, primarily due to the relatively higher proportions of exsmokers among retirees than among the other categories. Only 16 persons aged 35–49 were retired. Among those aged 50–64, 49.6 percent of the retirees were exsmokers compared with 33.3–38.0 percent among the other categories.

Income, unfortunately, had a high “no response” rate: 19 percent. However, the results in table 6 indicate a curvilinear relationship between income and smoking cessation among persons under 65 years old, that is, those with household incomes of \$10,000–\$24,999 exhibited the highest cessation rates.

Relationship of cigarette consumption levels to cessation. In general, for ages 20–64, there were proportionately more exsmokers among those whose consumption levels were either light ($\frac{1}{2}$ pack) or heavy (2 or more packs) than among moderate smokers (table 7). For those aged 65 and over, there were more exsmokers among heavy than among light or moderate smokers (76.6 percent compared with 50.7–55.9 percent).

Discussion and Conclusions

Smokers are at higher risk for a variety of diseases, including lung cancer, emphysema, bronchitis, and heart disease (1). Traditionally, smoking has been discouraged among women. This tradition has been changing rapidly, as evidenced by the current high smoking rate among female teenagers. Additionally, nonwhites in Broward County and the United States have had higher age-specific death rates from heart disease and lung cancer than whites (9). Hence, the high smoking rate and low cessation rate among non-white men is of particular concern.

The elderly—those who were aged 65 and over—as a group, had the highest smoking cessation rate. More than 60 percent of the elderly who had ever smoked had quit, probably because, in part, of a desire to maximize longevity and quality of life. Since the risk of dying from adverse health conditions related to smoking, such as lung cancer, becomes greater with age (10), incentives to quit increase with age. Additionally, age would enhance the likelihood of knowing someone whose health was adversely affected by smoking. This factor has been shown to be related to successful quitting (7).

Factors associated with age itself, such as experience and knowledge gained with age, were presumably primary influences on smoking cessation among the elderly, since marital status, educational level, occu-

Table 3. Distribution of regular smokers and exsmokers in sample by age group and marital status, Broward County, Fla., 1978

Age group (years) and marital status	Number	Smokers		Exsmokers		Chi-square between marital statuses
		Number	Percent	Number	Percent	
Total sample	2,330	1,524	65.4	806	34.6	
Married	1,802	1,130	62.7	672	37.3	¹ 25.09
Not married	528	394	74.6	134	25.4	
20–34	576	473	82.1	103	17.9	
Married	373	289	77.5	84	22.5	¹ 14.62
Not married	203	184	90.6	19	9.4	
35–49	581	441	75.9	140	24.1	
Married	497	363	73.0	134	27.0	¹ 14.37
Not married	84	78	92.9	6	7.1	
50–64	614	379	61.7	235	38.3	
Married	514	307	59.7	207	40.3	² 4.83
Not married	100	72	72.0	28	28.0	
65 and over	559	231	41.3	328	58.7	
Married	418	171	40.9	247	59.1	0.06
Not married	141	60	42.6	81	57.4	

¹ Significant at the .01 level.

² Significant at the .05 level.

NOTE: 24 missing.

Table 4. Distribution of regular smokers and exsmokers in sample by age group and educational level, Broward County, Fla., 1978

Age group (years) and educational level	Number	Smokers		Exsmokers		Chi-square between educational levels
		Number	Percent	Number	Percent	
Total sample	2,321	1,514	65.2	807	34.8	
High school or less	1,583	1,033	65.3	550	34.7	0.00
Post-high school	738	481	65.2	257	34.8	
20-34	573	470	82.0	103	18.0	
High school or less	345	292	84.6	53	15.4	3.58
Post-high school	228	178	78.1	50	21.9	
35-49	576	435	75.5	141	24.5	
High school or less	373	294	78.8	79	21.2	¹ 5.74
Post-high school	203	141	69.5	62	30.5	
50-64	613	380	62.0	233	38.0	
High school or less	437	272	62.2	165	37.8	0.01
Post-high school	176	108	61.4	68	38.6	
65 and over	559	229	41.0	330	59.0	
High school or less	428	175	40.9	253	59.1	0.00
Post-high school	131	54	41.2	77	58.8	

¹ Significant at the .05 level. NOTE: 33 missing.

Table 5. Distribution of regular smokers and exsmokers in sample by age group and occupational status, Broward County, Fla. 1978

Age group (years) and occupational status	Number	Smokers		Exsmokers		Chi-square among occupational statuses
		Number	Percent	Number	Percent	
Total sample	2,312	1,506	65.1	806	34.9	
White-collar	909	660	72.6	249	27.4	
Blue-collar	458	339	74.0	119	26.0	¹ 164.54
Housewife	379	264	69.7	115	30.3	
Retired	566	243	42.9	323	57.1	
20-34	569	466	81.9	103	18.1	
White-collar	307	254	82.7	53	17.3	
Blue-collar	163	136	83.4	27	16.6	3.29
Housewife	96	73	76.0	23	24.0	
Retired	3	3	100.0	0	0.0	
35-49	571	430	75.3	141	24.7	
White-collar	298	221	74.2	77	25.8	
Blue-collar	146	113	77.4	33	22.6	² 10.54
Housewife	111	89	80.2	22	19.8	
Retired	16	7	43.8	9	56.2	
50-64	613	380	62.0	233	38.0	
White-collar	234	156	66.7	78	33.3	
Blue-collar	129	80	62.0	49	38.0	² 10.30
Housewife	119	78	65.5	41	34.5	
Retired	131	66	50.4	65	49.6	
65 and over	559	230	41.1	329	58.9	
White-collar	70	29	41.4	41	58.6	
Blue-collar	20	10	50.0	10	50.0	1.20
Housewife	53	24	45.3	29	54.7	
Retired	416	167	40.1	249	59.9	

¹ Significant at the .01 level.

² Significant at the .05 level.

NOTE: 42 missing.

pation, and income had little relationship. Elderly quitters also tended to have been heavier smokers, unlike the findings of other research that quitters had been light smokers (4,11).

Of the sample aged 20–64, several sociodemographic factors were related to successful smoking cessation among the nonelderly portion of the sample. One factor was being married. The influence of the spouse, greater concern for potential health hazards due to smoking, and the role modeling effects of smoking on children (4,7,12–16) are plausible explanations for this finding.

The more educated persons in the sample were presumably more aware of the risk factors of smoking, which could explain the association between higher education and smoking cessation. Other researchers have also found a relationship between higher education and being an exsmoker (6,17), although in one large sample study no relationship was observed (18). A unique finding was the relationship of retirement to smoking cessation: persons who retired early were more likely to quit than to continue smoking.

Income had a curvilinear relationship to cessation, in that income of \$10,000–\$24,999 annually had the greatest association with being an exsmoker. On the one hand, persons with higher incomes could better

afford to maintain a smoking habit. On the other hand, it could be postulated that feelings of frustration and futility due to poverty are disincentives to quitting.

The relationship of cigarette smoking levels to cessation ran counter to results of some other studies (4,11). A low smoking level (1/2 pack daily) was related to quitting. A moderate level (1–1 1/2 packs) was related to smoking. A high level (2 or more packs) was again associated with quitting. In an earlier study, however, the highest level of smoking considered was “30+” cigarettes per day, which is only 1 1/2 packs (4). A low smoking level may favor quitting because the habitual behavior is not as well established at lower levels of consumption (19). Very heavy smoking could introduce serious health risks and respiratory problems (1,20), providing an additional incentive to quit.

The results of this study indicate that if the primary objective of a smoking cessation program is to maximize cost effectiveness, the program should be targeted to the married, more educated, early retirees, middle income, light or heavy smokers, or the aged. For example, according to the results of some followup studies of various smoking withdrawal clinic populations, the long-term successful quitters tended to have been older, married, and light smokers (4,21). How-

Table 6. Distribution of regular smokers and exsmokers in sample by age group and income level, Broward County, Fla., 1978

Age group (years) and income level	Number	Smokers		Exsmokers		Chi-square among income levels
		Number	Percent	Number	Percent	
Total sample	1,907	1,226	64.3	681	35.7	
\$0–\$9,999	587	353	60.1	234	39.9	¹ 9.39
\$10,000–\$24,999	846	545	64.4	301	35.6	
\$25,000 and over	474	328	69.2	146	30.8	
20–34	507	416	82.1	91	17.9	
\$0–\$9,999	107	95	88.8	12	11.2	5.28
\$10,000–\$24,999	280	221	78.9	59	21.1	
\$25,000 and over	120	100	83.3	20	16.7	
35–49	473	347	73.4	126	26.6	
\$0–\$9,999	77	68	88.3	9	11.7	¹ 10.95
\$10,000–\$24,999	217	150	69.1	67	30.9	
\$25,000 and over	179	129	72.1	50	27.9	
50–64	492	296	60.2	196	39.8	
\$0–\$9,999	159	97	61.0	62	39.0	4.78
\$10,000–\$24,999	226	126	55.8	100	44.2	
\$25,000 and over	107	73	68.2	34	31.8	
65 and over	435	167	38.4	268	61.6	
\$0–\$9,999	244	93	38.1	151	61.9	0.03
\$10,000–\$24,999	123	48	39.0	75	61.0	
\$25,000 and over	68	26	38.2	42	61.8	

¹ Significant at the .01 level. NOTE: 447 missing.

Table 7. Distribution of regular smokers and exsmokers in sample by age group and cigarette consumption level, Broward County, Fla., 1978

Age group (years) and daily cigarette consumption level	Number	Smokers		Exsmokers		Chi-square among consumption levels
		Number	Percent	Number	Percent	
Total sample	2,354	1,535	65.2	819	34.8	
½ pack	507	314	61.9	193	38.1	
1 pack	950	654	68.8	296	31.2	¹ 40.49
1½ packs	412	300	72.8	112	27.2	
2 or more packs	485	267	55.1	218	44.9	
20-34	582	478	82.1	104	17.9	
½ pack	157	122	77.7	35	22.3	
1 pack	249	209	83.9	40	16.1	3.22
1½ packs	100	85	85.0	15	15.0	
2 or more packs	76	62	81.6	14	18.4	
35-49	583	441	75.6	142	24.4	
½ pack	94	66	70.2	28	29.8	
1 pack	229	184	80.3	45	19.7	¹ 11.89
1½ packs	121	98	81.0	23	19.0	
2 or more packs	139	93	66.9	46	33.1	
50-64	623	384	61.6	239	38.4	
½ pack	122	60	49.2	62	50.8	
1 pack	245	161	65.7	84	34.3	¹ 14.91
1½ packs	114	81	71.1	33	28.9	
2 or more packs	142	82	57.7	60	42.3	
65 and over	566	232	41.0	334	59.0	
½ pack	134	66	49.3	68	50.7	
1 pack	227	100	44.1	127	55.9	¹ 22.02
1½ packs	77	36	46.8	41	53.2	
2 or more packs	128	30	23.4	98	76.6	

¹ Significant at the .01 level.

ever, since most exsmokers have quit on their own (22), and the types of persons who are most successful in withdrawal clinics might fall into similar categorizations as persons who successfully quit on their own, what may appear to be a cost-effective program to encourage smoking cessation may accomplish as much or as little as some form of self-help or the various psychosocial influences that motivate the population at large. Self-help, of course, includes using pre-packaged kits, guidebooks, instructions, and other aids.

If, on the other hand, the primary justification of the program is based on cost-benefit analysis, the program should be targeted toward some of the high-risk groups in the population, that is, nonwhite men, young nonmarrieds, and the poor; all of these groups have higher rates of smoking and lower rates of quitting than other groups. If programs were devised to motivate persons who are (at least from a statistical perspective) unlikely to stop smoking otherwise, the morbidity and mortality associated with this health risk should be reduced appreciably.

Since an estimated 75-80 percent of all lung cancer is considered to be caused by cigarette smoking (10),

and since in Broward County nonwhite men aged 25-64 had higher mortality rates from lung cancer than whites (9), this group of men should benefit greatly if they could be motivated to quit smoking. Likewise, the poor—who seem less affected by economic constraints to quit smoking than might have been expected—presumably would also be less able to bear the economic costs of ill health and possible days of work lost. Beyond the high-risk groups identified in this study, the special health dangers of smoking for pregnant women (20) would justify their inclusion in programs targeted to high-risk persons.

Without delving into a detailed analysis of smoking cessation techniques that have been covered elsewhere (22), we believe that some brief comments are warranted. The smoking cessation programs that resulted in the highest success rates were those using group counseling, hypnosis, or an aversion technique involving rapid smoking (22). Motivationally, successful exsmokers persisted longer in their efforts to quit, used a greater variety of techniques, and obtained more social reinforcement and self-reinforcement (23). Although attempts to motivate people who seem less

likely to be motivated to quit smoking may seem futile, the ultimate gains to society in the event of success are potentially large in respect to added years of life and decreased morbidity and mortality.

References

1. U.S. Public Health Service: Smoking and health. A report of the Surgeon General. DHEW Publication No. (PHS) 79-50066. U.S. Government Printing Office, Washington, D.C., 1979.
2. Lewis, B. B.: 1978 age, race, and sex components of Florida's population. University of Florida, Bureau of Economic and Business Research, Population Studies, No. 47, April 1979.
3. Danaher, B. G.: Smoking cessation programs in occupational settings. *Public Health Rep* 95: 149-157 (1980).
4. West, D. W., Graham, S., Swanson, M., and Wilkinson, G.: Five year followup of a smoking withdrawal clinic population. *Am J Public Health* 67: 536-544 (1977).
5. Friedman, G. D., et al.: Smoking among white, black, and yellow men and women. *Am J Epidemiol* 96: 23-35 (1972).
6. Rustin, R. M., et al.: Smoking habits and psycho-sociobiological factors. *J Psychosom Res* 22: 89-99 (1978).
7. Bosse, R., and Rose, C. L.: Age and interpersonal factors in smoking cessation. *J Health Soc Behav* 14: 381-387 (1973).
8. Bosse, R., and Rose, C. L.: Smoking cessation and sex role convergence. *J Health Soc Behav* 17: 53-61 (1976).
9. Health Planning and Development Council for Broward County, Inc.: Health of Broward County's residents. Health status component of the health systems plan. Ft. Lauderdale, Fla., 1979, pp. 58,145.
10. American Cancer Society, Inc.: 1978 cancer facts and figures. New York, 1977.
11. Pomerleau, O., Adkins, D., and Pertschuk, M.: Predictors of outcome and recidivism in smoking cessation treatment. *Addict Behav* 3: 65-70 (1978).
12. Warnecke, R. B., Graham, S., Rosenthal, S., and Manfredi, C.: Social and psychological correlates of smoking behavior among black women. *J Health Soc Behav* 19: 397-410 (1978).
13. Salber, E. J., and MacMahon, B.: Cigarette smoking among high school students related to social class and parental smoking habits. *Am J Public Health* 51: 1780-1789 (1961).
14. Wohlford, P.: Initiation of smoking: Is it related to parental behavior? *J Consult Clin Psychol* 34: 148-151 (1970).
15. Borland, B. L. and Rudolph, J. P.: Relative effects of low socio-economic status, parental smoking and poor scholastic performance on smoking among high school students. *Soc Sci Med* 9: 27-30 (1975).
16. Allegrante, J. P., O'Rourke, T. W., and Tuncalp, S.: A multivariate analysis of selected psychosocial variables on the development of subsequent youth smoking behavior. *J Drug Educ* 7: 237-248 (1977-78).
17. Wynder, E. L., Covey, L. S., and Mabuchi, K.: Current smoking habits by selected variables: Their effect on future disease trends. *Am J Epidemiol* 100: 168-188 (1974).
18. Eisinger, R. A.: Psychosocial predictors of smoking behavior change. *Soc Sci Med* 6: 137-144 (1972).
19. Burns, B. H.: Chronic chest disease, personality, and success in stopping cigarette smoking. *Br J Prev Soc Med* 23: 23-27 (1969).
20. U.S. Public Health Service: The health consequences of smoking for women: A report of the Surgeon General. U.S. Government Printing Office, Washington, D.C., 1980.
21. Cruise, J. S., Fisher, F., and Cruise, R. J.: An evaluation of a smoking withdrawal clinic. *J Med Assoc Ga* 68: 819-822 (1979).
22. Schwartz, J. L.: Review and evaluation of methods of smoking cessation, 1969-77. Summary of a monograph. *Public Health Rep* 94: 558-563 (1979).
23. Liberman, R. P.: Behavioral change: A stopped smoker is not a non-smoker. In *Research on smoking behavior*, edited by M. E. Jarvik, et al. National Institute on Drug Abuse Research, Monograph Series 17: 373-381, December 1977.

SYNOPSIS

DZEGEDE, SYLVI A. (Health Planning and Development Council for Broward County (Fla.), Inc.), HACKWORTH, JOHN R., and PIKE, STEVEN W.: *Factors that differentiate smokers from exsmokers in a Florida metropolitan area. Public Health Reports, Vol. 96, July-August 1981, pp. 326-334.*

Since many communities have limited resources to devote to public health programs, and since smoking is a proved health hazard, it is im-

portant to know which factors are associated with people who successfully quit smoking, as well as to identify those subpopulations at greatest risk of continuing to smoke. A large sample survey of households in a metropolitan Florida county revealed that those who had quit smoking for at least a year tended to be married, more educated, early retirees, middle income, light or heavy (but not moderate) smokers, or older than 64 years. Nonwhite men, as a group, were found to have a high

smoking rate and a low cessation rate. Other high-risk categories were persons 20-49 who were either not married or whose household incomes were less than \$10,000 annually.

The authors recommend that smoking cessation programs focusing on cost effectiveness gear their efforts toward the types of persons found to be more successful at quitting. Programs based on cost-benefit analysis, on the other hand, should target their efforts on the high-risk groups in the population.